

CLAIMS:

1. An RF coil apparatus comprising:
a plurality of coil elements connected in parallel; and
5 an adjusting device for adjusting electric current ratios among said plurality of coil elements.
2. The RF coil apparatus of claim 1, wherein
said adjusting device adjusts the electric current ratios by adjusting the
10 admittances of said plurality of coil elements.
3. The RF coil apparatus of claim 2, wherein
said adjusting device adjusts the admittances by adjusting the electrostatic
capacitances of said plurality of coil elements.
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4. The RF coil apparatus of claim 1, wherein
said adjusting device adjusts the electric current ratios among said plurality
of coil elements while keeping the overall electrostatic capacitance of the parallel
circuit of said plurality of coil elements at a constant level.
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5. The RF coil apparatus of claim 1, wherein
said adjusting device stores the electric current ratios among said plurality
of coil elements corresponding to an FOV.
- 25 6. The RF coil apparatus of claim 1, wherein
said adjusting device also adjusts the overall electrostatic capacitance of the
parallel circuit of said plurality of coil elements.
7. The RF coil apparatus of claim 6, wherein

said adjusting device stores the electric current ratios and circuit constants of said plurality of coil elements corresponding to an FOV.

8. The RF coil apparatus of claim 1, wherein
5 said plurality of coil elements have a common coil axis, and are arranged at intervals on said coil axis.

9. A magnetic resonance imaging apparatus for collecting magnetic resonance signals while applying a static magnetic field, a gradient magnetic field
10 and an RF magnetic field to a subject to be imaged, and producing an image based on the magnetic resonance signals, said apparatus comprising:

an RF coil apparatus for conducting at least one of the application of said RF magnetic field and reception of said magnetic resonance signals, said RF coil apparatus comprising:

15 a plurality of coil elements connected in parallel; and
an adjusting device for adjusting electric current ratios among said plurality of coil elements.

10. The magnetic resonance imaging apparatus of claim 9, wherein
20 said adjusting device adjusts the electric current ratios by adjusting the admittances of said plurality of coil elements.

11. The magnetic resonance imaging apparatus of claim 10, wherein
said adjusting device adjusts the admittances by adjusting the electrostatic
25 capacitances of said plurality of coil elements.

12. The magnetic resonance imaging apparatus of claim 9, wherein
said adjusting device adjusts the electric current ratios among said plurality of coil elements while keeping the overall electrostatic capacitance of the parallel

circuit of said plurality of coil elements at a constant level.

13. The magnetic resonance imaging apparatus of claim 9, wherein
said adjusting device stores the electric current ratios among said plurality
5 of coil elements corresponding to an FOV.

14. The magnetic resonance imaging apparatus of claim 9, wherein
said adjusting device also adjusts the overall electrostatic capacitance of the
parallel circuit of said plurality of coil elements.

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15. The magnetic resonance imaging apparatus of claim 14, wherein
said adjusting device stores the electric current ratios and circuit constants
of said plurality of coil elements corresponding to an FOV.

16. The magnetic resonance imaging apparatus of claim 9, wherein
said plurality of coil elements have a common coil axis, and are arranged at
intervals on said coil axis.

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